Artificial intelligence in developing countries: The impact of generative artificial intelligence (AI) technologies for development

Abstract

This paper explores the potential impact of Generative Artificial Intelligence (Generative AI) on developing countries, considering both positive and negative effects across various domains of information, culture, and industry. Generative Artificial Intelligence refers to artificial intelligence (AI) systems that generate content, such as text, audio, or video, aiming to produce novel and creative outputs based on training data. Compared to conversational artificial intelligence, generative artificial intelligence systems have the unique capability of not only providing replies but also generating the content of those responses. Recent advancements in Artificial Intelligence during the Fourth Industrial Revolution, exemplified by tools like ChatGPT, have gained popularity and reshaped content production and creation. However, the benefits of generative artificial intelligence are not equally accessible to all, especially in developing countries, where limited access to cutting-edge technologies and inadequate infrastructure pose challenges. This paper seeks to understand the potential impact of generative AI technologies on developing countries, considering economic growth, access to technology, and the potential paradigm shift in education, healthcare, and the environment. The findings emphasize the importance of providing the necessary support and infrastructure to ensure that generative AI contributes to inclusive development rather than deepening existing inequalities. The study highlights the significance of integrating Generative AI into the context of the Fourth Industrial Revolution in developing countries, where technological change is a crucial determinant of progress and equitable growth.